

Attorney's Docket No.: 16292-002001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Steven Brooks  
Serial No. : 10/628,836  
Filed : July 28, 2003  
Title : DESK AND DESKING SYSTEM

Art Unit : 2839  
Examiner : Jean Duverne

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF PRIORITY DOCUMENTS UNDER 35 USC §119

Responsive to Action dated August 25, 2004, Applicant hereby confirms the claim of priority under 35 USC §119 from the following application(s):

- WIPO Application No. GB02/00347 filed January 28, 2002
- United Kingdom Application No. 0102143.5 filed January 26, 2001
- United Kingdom Application No. 0118896 filed August 2, 2001

A certified copy of each application from which priority is claimed is submitted herewith.

Brenda Leeds Binder has been given limited recognition under 37 CFR § 10.9(b) as an employee of the Fish & Richardson PC law firm to prepare and prosecute patent applications wherein the patent applicant is a client of Fish & Richardson PC and the attorney or agent of record in the applications is a registered practitioner who is a member of Fish & Richardson, which is the case in the present application. A copy of the Limited Recognition document, which expires December 1, 2004, is attached hereto.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

November 23, 2004

Date of Deposit

Signature

Sarah E. Hoke

Typed or Printed Name of Person Signing Certificate

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Applicant : Steven Brooks  
Serial No. : 10/628,836  
Filed : July 28, 2003  
Page : 2 of 2

Attorney's Docket No.: 16292-002001

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Respectfully submitted,

Date: Nov 23, 2004

  
\_\_\_\_\_  
Brenda Leeds Binder  
Limited Recognition under 37 CFR § 10.9(b)

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NP10 8QQ

## CERTIFIED COPY OF PRIORITY DOCUMENT

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation and Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the international application filed on 28 JANUARY 2002 under the Patent Cooperation Treaty at the UK Receiving Office. The application was allocated the number PCT/GB02/00347

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration for the substitution as, or the inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

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Signed

Date:

8 June 2004

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## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

|  |          |
|--|----------|
| For receiving Office use only  |          |
| PCT/GB 02/00347  |          |
| International Application No.  |          |
| 28 JANUARY 2002  | 28/01/02 |
| International Filing Date  |          |
| United Kingdom Patent Office   |          |
| PCT International Application  |          |
| Name of receiving Office and "PCT International Application"                         |          |
| Applicant's or agent's file reference (if desired) (12 characters maximum) 1042-0002 |          |

|   |  |
|---|--|
| Box No. I TITLE OF INVENTION  |  |
| Desk and desking system   |  |
| Box No. II APPLICANT <input type="checkbox"/> This person is also inventor  |  |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)     |  |
| Intercase UK Limited,<br>Unit 2, Frimhurst Farm, Deepcut Bridge Road, Deepcut,<br>Camberley, Surrey GU16 6RF, GB  |  |
| Telephone No.   |  |
| Facsimile No.   |  |
| Teleprinter No.   |  |
| Applicant's registration No. with the Office  |  |
| State (that is, country) of nationality:<br>GB  | State (that is, country) of residence:<br>GB |
| This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input checked="" type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box |  |
| Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)   |  |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)     |  |
| Steven Brooks<br>Unit 2, Frimhurst Farm, Deepcut Bridge Road, Deepcut,<br>Camberley, Surrey GU16 6RF, GB  |  |
| This person is:<br><input type="checkbox"/> applicant only<br><input checked="" type="checkbox"/> applicant and inventor<br><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)   |  |
| Applicant's registration No. with the Office  |  |
| State (that is, country) of nationality:<br>GB  | State (that is, country) of residence:<br>GB |
| This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box |  |
| <input type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.   |  |
| Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE  |  |
| The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: <input type="checkbox"/> agent <input type="checkbox"/> common representative  |  |
| Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  |  |
| IPULSE<br>26 Mallinson Road,<br>London, SW11 1BP,<br>GB   |  |
| Telephone No.<br>+44 207 223 4979   |  |
| Facsimile No.<br>+44 207 228 8210   |  |
| Teleprinter No.   |  |
| Agent's registration No. with the Office  |  |
| <input type="checkbox"/> Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.  |  |

Sheet No. 2

## Box No. V DESIGNATION OF STATES

Mark the applicable check-boxes below; at least one must be marked.

The following designations are hereby made under Rule 4.9(a):

## Regional Patent

- ☒ AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZM Zambia, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH & LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, TR Turkey, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GQ Equatorial Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....

## National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> AE United Arab Emirates               | <input checked="" type="checkbox"/> GM Gambia                                    | <input checked="" type="checkbox"/> NZ New Zealand                 |
| <input checked="" type="checkbox"/> AG Antigua and Barbuda                | <input checked="" type="checkbox"/> HR Croatia                                   | <input checked="" type="checkbox"/> OM Oman                        |
| <input checked="" type="checkbox"/> AL Albania                            | <input checked="" type="checkbox"/> HU Hungary                                   | <input checked="" type="checkbox"/> PH Philippines                 |
| <input checked="" type="checkbox"/> AM Armenia                            | <input checked="" type="checkbox"/> ID Indonesia                                 | <input checked="" type="checkbox"/> PL Poland                      |
| <input checked="" type="checkbox"/> AT Austria                            | <input checked="" type="checkbox"/> IL Israel                                    | <input checked="" type="checkbox"/> PT Portugal                    |
| <input checked="" type="checkbox"/> AU Australia                          | <input checked="" type="checkbox"/> IN India                                     | <input checked="" type="checkbox"/> RO Romania                     |
| <input checked="" type="checkbox"/> AZ Azerbaijan                         | <input checked="" type="checkbox"/> IS Iceland                                   | <input checked="" type="checkbox"/> RU Russian Federation          |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina             | <input checked="" type="checkbox"/> JP Japan                                     |  |
| <input checked="" type="checkbox"/> BB Barbados                           | <input checked="" type="checkbox"/> KE Kenya                                     | <input checked="" type="checkbox"/> SD Sudan                       |
| <input checked="" type="checkbox"/> BG Bulgaria                           | <input checked="" type="checkbox"/> KG Kyrgyzstan                                | <input checked="" type="checkbox"/> SE Sweden                      |
| <input checked="" type="checkbox"/> BR Brazil                             | <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea     | <input checked="" type="checkbox"/> SG Singapore                   |
| <input checked="" type="checkbox"/> BY Belarus                            | <input checked="" type="checkbox"/> KR Republic of Korea                         | <input checked="" type="checkbox"/> SI Slovenia                    |
| <input checked="" type="checkbox"/> BZ Belize                             | <input checked="" type="checkbox"/> KZ Kazakhstan                                | <input checked="" type="checkbox"/> SK Slovakia                    |
| <input checked="" type="checkbox"/> CA Canada                             | <input checked="" type="checkbox"/> LC Saint Lucia                               | <input checked="" type="checkbox"/> SL Sierra Leone                |
| <input checked="" type="checkbox"/> CH & LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> LK Sri Lanka                                 | <input checked="" type="checkbox"/> TJ Tajikistan                  |
| <input checked="" type="checkbox"/> CN China                              | <input checked="" type="checkbox"/> LR Liberia                                   | <input checked="" type="checkbox"/> TM Turkmenistan                |
| <input checked="" type="checkbox"/> CO Colombia                           | <input checked="" type="checkbox"/> LS Lesotho                                   | <input checked="" type="checkbox"/> TN Tunisia                     |
| <input checked="" type="checkbox"/> CR Costa Rica                         | <input checked="" type="checkbox"/> LT Lithuania                                 | <input checked="" type="checkbox"/> TR Turkey                      |
| <input checked="" type="checkbox"/> CU Cuba                               | <input checked="" type="checkbox"/> LU Luxembourg                                | <input checked="" type="checkbox"/> TT Trinidad and Tobago         |
| <input checked="" type="checkbox"/> CZ Czech Republic                     | <input checked="" type="checkbox"/> LV Latvia                                    |  |
| <input checked="" type="checkbox"/> DE Germany                            | <input checked="" type="checkbox"/> MA Morocco                                   | <input checked="" type="checkbox"/> TZ United Republic of Tanzania |
| <input checked="" type="checkbox"/> DK Denmark                            | <input checked="" type="checkbox"/> MD Republic of Moldova                       | <input checked="" type="checkbox"/> UA Ukraine                     |
| <input checked="" type="checkbox"/> DM Dominica                           | <input checked="" type="checkbox"/> MG Madagascar                                | <input checked="" type="checkbox"/> UG Uganda                      |
| <input checked="" type="checkbox"/> DZ Algeria                            | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia | <input checked="" type="checkbox"/> US United States of America    |
| <input checked="" type="checkbox"/> EC Ecuador                            | <input checked="" type="checkbox"/> MN Mongolia                                  |  |
| <input checked="" type="checkbox"/> EE Estonia                            | <input checked="" type="checkbox"/> MW Malawi                                    | <input checked="" type="checkbox"/> UZ Uzbekistan                  |
| <input checked="" type="checkbox"/> ES Spain                              | <input checked="" type="checkbox"/> MX Mexico                                    | <input checked="" type="checkbox"/> VN Viet Nam                    |
| <input checked="" type="checkbox"/> FI Finland                            | <input checked="" type="checkbox"/> MZ Mozambique                                | <input checked="" type="checkbox"/> YU Yugoslavia                  |
| <input checked="" type="checkbox"/> GB United Kingdom                     | <input checked="" type="checkbox"/> NO Norway                                    | <input checked="" type="checkbox"/> ZA South Africa                |
| <input checked="" type="checkbox"/> GD Grenada                            |  | <input checked="" type="checkbox"/> ZM Zambia                      |
| <input checked="" type="checkbox"/> GE Georgia                            |  | <input checked="" type="checkbox"/> ZW Zimbabwe                    |
| <input checked="" type="checkbox"/> GH Ghana                              |  |  |

Check-boxes below reserved for designating States which have become party to the PCT after issuance of this sheet:

- ☒ All other states ..... ☐ ..... ☐ .....
- ☐ ..... ☐ ..... ☐ .....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

Sheet No. 3

## Box No. VI PRIORITY CLAIM

The priority of the following earlier application(s) is hereby claimed:

| Filing date<br>of earlier application<br>(day/month/year) | Number<br>of earlier application | Where earlier application is:    |   |  |
|---|----------------------------------|----------------------------------|---|--|
|   |                                  | national application:<br>country | regional application:*<br>regional Office | international application:<br>receiving Office |
| item (1)<br>▲ 26 January 2001<br>26.01.01                 | GB0102143.5                      | GB                               |   |  |
| item (2)<br>▲ 3 August 2001<br>03.08.01                   | GB0118896.0                      | GB                               |   |  |
| item (3)  |                                  |                                  |   |  |
| item (4)  |                                  |                                  |   |  |
| item (5)  |                                  |                                  |   |  |

☐ Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

☒ all items    ☐ item (1)    ☐ item (2)    ☐ item (3)    ☐ item (4)    ☐ item (5)    ☐ other, see Supplemental Box

\* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)): . . . .

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / EP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

## Box No. VIII DECLARATIONS

The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

Number of  
declarations

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Box No. VIII (i)   | Declaration as to the identity of the inventor   | : |
| <input type="checkbox"/> Box No. VIII (ii)  | Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent             | : |
| <input type="checkbox"/> Box No. VIII (iii) | Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application | : |
| <input type="checkbox"/> Box No. VIII (iv)  | Declaration of inventorship (only for the purposes of the designation of the United States of America)                               | : |
| <input type="checkbox"/> Box No. VIII (v)   | Declaration as to non-prejudicial disclosures or exceptions to lack of novelty   | : |

Sheet No. 4

## Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains:

(a) the following number of sheets in paper form:

request (including declaration sheets) : 4  
 description (excluding sequence listing part) : 18  
 claims : 4  
 abstract : 1  
 drawings : 4

Sub-total number of sheets : 30

sequence listing part of description (actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (b) below)

Total number of sheets : 30

(b) sequence listing part of description filed in computer readable form

(i) ☐ only (under Section 801(a)(i))(ii) ☐ in addition to being filed in paper form (under Section 801(a)(ii))

Type and number of carriers (diskette, CD-ROM, CD-R or other) on which the sequence listing part is contained (additional copies to be indicated under item 9(ii), in right column):

Figure of the drawings which should accompany the abstract: Fig. 1

This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):

1. ☒ fee calculation sheet
2. ☐ original separate power of attorney
3. ☐ original general power of attorney
4. ☐ copy of general power of attorney; reference number, if any: .....
5. ☐ statement explaining lack of signature
6. ☐ priority document(s) identified in Box No. VI as item(s): .....
7. ☐ translation of international application into (language): .....
8. ☐ separate indications concerning deposited microorganism or other biological material
9. ☐ sequence listing in computer readable form (indicate also type and number of carriers (diskette, CD-ROM, CD-R or other))
  - (i) ☐ copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application)
  - (ii) ☐ (only where check-box (b)(i) or (b)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter
  - (iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing part mentioned in left column
10. ☐ other (specify): .....

Number of items

## Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

David Rickard CPA, EPA,  
 Representing and as Agent of the Applicants

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|   |   |
|---|---|
| 1. Date of actual receipt of the purported international application: 28 JANUARY 2002 28/01/02  | 2. Drawings:<br><input checked="" type="checkbox"/> received:<br><br><input type="checkbox"/> not received. |
| 3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application: |   |
| 4. Date of timely receipt of the required corrections under PCT Article 11(2):  |   |
| 5. International Searching Authority (if two or more are competent): ISA /  | 6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid                     |

For International Bureau use only

Date of receipt of the record copy  
 by the International Bureau:

## Desk and Desking System

The present invention relates generally to desks and desking systems for supporting computers and other electronic devices.

5

Desks and desking systems for supporting computers are well known. A typical computer desk comprises a main desktop and, often, various drawers and cupboards, possibly with one or more of the drawers and/or stands for use in carrying a computer keyboard and/or viewing screen (VDU). They may even include a drawer, rack or stand for the central processing unit chassis to  
10 hide it away at the back or beside a desk leg rather than positioning it on the desktop or on the floor adjacent or under the desk. Where a series of desks are used, for example in an office of networked computers each desk is generally separate from the others and the power and electronics cabling is supplied to each desk individually from power and cable connection points on the floor and/or wall.

15

In many situations rooms are set up with one or more rows of desks, each desk carrying one or more respective computers. These set ups are common in for example educational establishment classrooms and offices. Many of these desks will often be placed side-by-side or otherwise adjacent one another.

20

Existing Desk systems require (i) power cabling to the computer processors and various computer peripheral devices, for example VDU, keyboard, mouse, printers, scanner, (ii) cabling between the processor and peripheral devices, and between various peripheral devices, (iii) telephone connections for Internet access, and (iv) in some cases network cabling connecting the  
25 computers to each other and to other devices. Various attempts have been made to overcome this problem. Commonly used systems for dealing with these cables include tying them together with plastic cable ties, string, or plastic "Cable Zip" tubes. Where the cables cross the floor from desk to desk or from cable and power outlets they are taped to the floor, placed under rubber cable protectors that form ridges on top of the floor, or are placed in trunking under the floor.  
30 Loose cabling and the currently used systems are unsightly and dangerous. The cabling is subject



- to damage through being bent, things being dropped on it, people tripping over it or walking on it. It also allows easy access to vandals. People can become caught up in loose cables and injure themselves or damage the equipment. Taping cables to the floor with or without the use of rubber protectors create a ridge on which people can trip and it can become displaced over time causing damage. Trunking is expensive and must be carefully laid out with the relevant connection points being located precisely for each desk. Each connection point is expensive to purchase and install. It also creates inflexibility in an office because if the arrangement of the desks is to be changed this requires the connection points to be moved, which is expensive.
- 10 With computer processors and peripheral devices used with existing desking being located on or under the desk, typically on the floor or a small stand, the equipment is easily damaged, either deliberately or accidentally. It is also easy for some or all of the equipment to be vandalized or stolen
- 15 A further major difficulty with desktop systems that sit on the desktop is that they take up valuable desktop space that is required for other uses, for example paper based ones. With the computer chassis and VDU both on the desktop, a person working at the desktop effectively has their line of sight cut-off in front of them. This is particularly a problem in educational environments where both teacher and pupil can work more effectively if they have visual contact.
- 20 It is also a problem in office environments as it makes communication more difficult. This problem is made worse where a person uses more than one computer on a desk, as for example do market traders. A problem with placing the processors underneath the desk so that they do not occupy valuable desk space is that it is awkward to access the Floppy disk, Zip disk or other drive ports to insert and remove storage media and software. It is also difficult to
- 25 connect/disconnect additional cables, for example headphones/headsets.

Another difficulty with current computer desking systems is the clutter that occurs on the desktop caused by computer peripherals, such as keyboard mouse and VDU. This clutter is detrimental to the use of such desks for non-computing activities such as paperwork.

Further, the cost of separate computer and desk solutions inevitably produces diseconomies resulting from the employment of products from industries that have traditionally remained separate. A computer desk usually starts from the premise that there is a table to which a  
5 computer and cabling is added. This is an uneconomic method of providing a holistic solution to the use of electronic devices in offices and desking.

Existing computer desking systems also suffer from over-complexity when setting them up and during their use. Setting-up typically requires, the planning of the desk layout and installation of  
10 the trunking and connection points, the planning of the cabling, then cabling for power and networking, the initial installation of the desk, the installation of the computer system and connection to the cabling, and finally testing. In use, any faults with the computer will often then require a certain degree of cable disconnection and component dismantling in order to take the computer chassis away for servicing or repair. This is time-consuming, expensive and  
15 disruptive. All of this makes desk layouts inflexible to quick change. In modern business flexibility is important to adapt to new management techniques and market conditions. Existing desks are not made to connect together. Currently they are simply placed side by side and can therefore move about or they are tied together using a crude system such as cable ties, which still allow some movement. Existing desking systems are not designed to provide a flexible  
20 arrangement of placement when connected together.

Many attempts have been made to overcome these problems. There are many thousands of desk designs for offices specifically trying to optimize desking systems with computers. However, these suffer from many disadvantages, including:

- 25
- (i) as noted above, cabling is exposed, unsightly and dangerous. It is easily damaged, either accidentally or deliberately. Trunking systems are inflexible and expensive. The cabling of computers for a group of desks is complicated, time consuming, expensive and cumbersome to install and change, usually requiring a qualified  
30 technician.

(ii) a table is designed either in the conventional table form or as a table dedicated to use with a computer, with various things protruding from the desktop. The former type is cluttered and a lot of the working space is taken up with computer equipment that is usually not located in the best position for efficient and ergonomic working or has various attachments/stands that are at best a compromise attempt at a solution and also reduce working surface. The second reduces the flexibility of the desk for use for various different activities, an important requirement in school and office environments.

(iii) physical access to the Floppy disk, Zip disk or other drive ports to insert and remove storage media and software is difficult. It is also difficult to connect/disconnect additional cables, for example headphones/headsets.

(iv) storage of peripheral devices, for example a keyboards and mouse is at best a compromise and any cabling is not properly protected.

(v) the desks are not anchored to each other and move around, thus providing a substantially less stable platform than would be the case if they were anchored together. As a result objects will fall off the desk in between them. Further, the movement can damage cables.

(vi) the amount of equipment on the desk interferes with communication with others in the room.

The present invention aims to provide an improved desk and desking system that addresses the current difficulties by efficiently, effectively, and economically, bringing desking and computer systems and other electronic devices together in networked situations. The desks can be connected together and at the same time the computers are networked.

According to one aspect of the present invention there is provided a desk suitable for connection to another desk as part of a network of desks, each desk comprising:

a desktop comprising sides, a bottom-face, and a work surface on the top side of the desktop;

desktop support means; a chassis comprising one or more cassettes containing one or more

electronics systems; a power distribution system and an electronics connections system, both

mounted beneath the desktop and within the chassis and extending from one side of the desktop to another, connectable to at least one cassette and connectable to similar adjacent desks at one or more sides.

- 5 According to a further aspect of the present invention there is provided a desking system comprising two or more of the above desks that may be connected together. The system enables a desk according to the invention to be connected to a similar desk according to the present invention that may be the same or of a different plan shape to the first desk. The system may also comprise a bridge unit.

10

- According to another aspect of the invention at least one face of a cassette is located adjacent to the desktop side at which a person works at the desk such that the cassette or one or more ports in the cassette are accessible to that person. Preferably the cassette forms part of the chassis. Preferably the cassette is located entirely under the desktop. The cassette may be removably  
15 mounted to the desktop. In one form the cassette may be releasably mounted to the desktop by any suitable means, for example slidably mounted. In one embodiment, the underside of the desktop may be recessed to accommodate part or all of the cassette and components contained therein. Preferably the work surface extends over the top of at least most of the cassette and components contained therein so that the inside of the cassette cannot be accessed from above the  
20 desk and preferably the majority of the cassette is not visible from above the desktop. The cassette may be a self-contained unit that encloses the electronics components or at least one face may be open to allow easy access when it is removed from the desk. In one embodiment the cassette contains computer components, communications components and/or other electronics equipment. In another embodiment the cassette comprises a docking station to which a Laptop,  
25 Notebook or other portable computer or electronics device may be temporarily connected. In certain situations, for example hot-desking or transfer from office to home use, it may be preferred to provide cassettes that can be removed by the users for transport and insertion into another desk or reinsertion into the same desk at a later time. Suitable electronics components that may be included in the cassette comprise a central processing unit, modem, a disc drive unit,  
30 a floppy disc drive, a Zip drive and a CD disk drive. It may comprise other computer

components, subject of course to space limitations within the cassette. Without the presence of any disc drives, the cassette conveniently provides the basis for a thin client system where the primary processing and media storage is carried out on a central server which is networked to the cassettes. The cassette may be made of any suitable material. Preferably it is made of metal  
5 sheet or plastic.

The chassis may be any suitable chassis and may be integral with or attach to the support means. The chassis comprises the cassette/s. In one form the chassis comprises a frame. The chassis also preferably comprises cable conduits through which cables pass and which protect cables.  
10 The cable conduits may be tubes, trays or other suitable means and are located under the desktop. Preferably one or both of the cable conduits create an air channel that assists in ventilating and cooling at least some of the electronic components. Preferably the cable conduits induce airflow that helps to cool at least one cassette. The chassis is also capable of accommodating technologies other than personal computing, particularly where such technologies need to be  
15 networked. The chassis may be made of any suitable material or combination of materials. Preferably it includes metal tubing or U shaped sections.

The support means may be any suitable support means and may be additional to or an integral part of the chassis. The support means preferably comprises one or more legs. The legs may be,  
20 integral with, permanently attached, or detachable from the chassis. The legs may attach by any suitable means, for example they may screw into sockets located within the chassis. Alternately, the support means may comprise one or more brackets affixed to one or more walls or other features of a building in which the desk is to be used. A wall-mounted desk may be foldable against the wall to enable use of the floor space. When two or more desks or a desk and bridging  
25 unit are connected, then only one of them may require at least one leg at opposing sides, the remaining linked desks/bridging units may have at least one leg on one side only, with the side without legs being supported on the side of the desk/bridging unit against which it abuts. The support means may be made of any suitable material or combination of materials. Preferably the legs are made of metal tube. The support means may include transport means that enable the  
30 desk to be moved from place to place. Preferably the desk connections and transport means

permit the desk to be easily disconnected from a desk, transported to a new location and connected to another desk.

The desktop work surface, and/or one or more sides of the desktop and/or chassis preferably  
5 include one or more recesses for receiving a keyboard, a mouse, and/or a VDU or VDU mount.

The desktop work surface may also include one or more holes to permit access to items under the desktop. Preferably one or more holes in the desktop are provided to permit access to connection ports of the cassette located underneath, for example USB, Ethernet, power telephone and other ports. The desktop may include one or more cover means used to cover the recess/es when the  
10 keyboard, a mouse, a VDU and or other peripheral devices are not being placed in or taken out of the recess/es. One or more of the cover means may also be provided for the one or more access holes. One or more of the cover means may also comprise locking means to prevent access to unauthorized personnel.

15 Each desk and bridge unit preferably comprises connecting means to interlock one desk to another desk or bridge unit. The connecting means preferably holds the desks/bridge unit securely together when connected to each other but allow easy disassembling when they are required to be moved. Preferably the connecting means comprises at least one connecting recess located in one desktop/bridge-top and/or chassis and one or more retaining teeth of

20 complementary shape to the holding recess in the opposing location of the adjacent side of the desktop/bridge-top and/or chassis. Preferably the connecting means comprises a jigsaw like interlocking holding recess and tooth. Preferably the retaining tooth of one desk/bridge unit when placed in the retaining recess of the abutting desk/bridge unit may rest on the latter desk/bridge unit thus removing the need for separate support means on at least one side of at least

25 one desk/bridge unit. Preferably the retaining tooth rests on a part of the chassis exposed by the holding recess. Fixing means may also be used in conjunction with the recess and teeth. It will be appreciated that various other shapes of connecting means may be used. Any suitable connecting means may be used for example bolts or screws connecting desktops and/or chassis of desks or bridge units adjacent each other. Preferably there are also provided end caps which on  
30 one side are complementary in shape to the retaining teeth or locking recess and can be used on a

free end of the desk, ie an end that is not connected to another desk or bridge unit, to provide a straight end for the desk.

A computer, Internet communicator and similar devices comprise not merely electronics components, for example a CPU, a disk drive unit etc. but also a mouse (not shown), a keyboard (not shown), and a VDU. These units are standard units that may be located on the desktop as required.

The VDU, where it is of a TFT or other flat screen type, is preferably located on VDU mount means that preferably takes up minimal desk space and minimally restricts the users view behind the desk. Preferably the VDU mount means comprises a single arm rotatably connected to the desk. The arm may be flexible or stiff and is preferably hollow with any signal and power cables for the VDU located within the arm to protect them. Preferably the VDU mount comprises a hollow tube and the VDU is mounted adjacent an end of the tube remote from the desktop.

Preferably the VDU is connected to the remote end of the VDU mount with a universal or swivel joint that permits positioning of the VDU by the user. Preferably the VDU mount is mounted on the desk towards the center at the back, thus providing clearance from the desktop and allowing appropriate movement of the VDU by the user. Various models for the VDU mount means are suitable, giving varying degrees of flexibility in the movement of the monitor. A suitably robust transparent protective screen can be mounted in front of the VDU if desired. Where the VDU is of a CRT type, then this may be positioned on the desktop. Preferably, the desktop for CRT VDU usage should be some 200 mm deeper than where a TFT VDU is used. This preferably gives desktop depths of approximately 800 mm and 600 mm respectively.

As an alternative to the VDU bracket referred to above, the VDU can be stowably mounted. For example, it may be mounted on a gas strut combined with a guide, such that when pressure is applied to the top of the VDU, the unit sinks down on the gas strut to below the desktop, where it may be locked into position. Alternatively, or in conjunction with a gas strut, the VDU may move along a guide rail, for example into a vertical position at the back of the chassis or horizontal position within the chassis. In order to accommodate this action, a hatch in the desktop

may open and close, for example by applying pressure to the hatch when it is in a closed position, whereupon a pressure catch releases the hatch and a spring mechanism opens the hatch to its fully opened position, thus allowing the VDU to be stowed away and the hatch to be closed. When the VDU needs to be revealed, then reversing the above action will open the hatch and  
5 allow the VDU to rise into an operational position and the hatch to close again.

The power distribution system preferably comprises split power cabling. The cabling preferably provides a connection between one side of the desktop and another side and also to the cassette/s. The power may be a low voltage system that provides power to the electronic units directly; the  
10 low voltage may be provided by mains powered transformer unit/s coupled to one end of a sequence of power distribution systems in a sequence of two or more desks. Alternatively, the power may be a mains type system (AC, and 100 V or 230 V) in which case, a cassette may comprise a power unit. Any suitable power cable may be used, for example when using a standard power supply in the UK, 240 V, adjacent desks and the cassette and/or cassette may be  
15 linked using one or more standard IEC power cables linked together. The cables are located beneath the desktop. Preferably the cables terminate adjacent a side of the desk in cable connecting means which enable the cables to be connected to the cables of another desk. In one embodiment the cable connection means comprises one or more plugs. In one embodiment a cable or group of cables ends at a male plug at one side of the desk and a female plug at the other  
20 side of the desk. The connection means enable easy connection of the cables of adjoining desks, thus creating a continuous power circuit supplying adjoining desks.

In another embodiment, the power distribution source comprises a cable extending from one side of the desktop to a power connector unit connected to the chassis. The cable is preferably  
25 sufficiently long that it can be inserted through a hole in the chassis side of an adjacent desk and connected to a connector unit of the adjacent desk.

The cabling is located in the desk in protective conduits connected to the desk. Preferably the conduits and/or trays are part of the chassis. In one embodiment the chassis comprises a  
30 segregated metal cable channel running between adjacent one side of the desk the cassette/s and



another side of the desk, thus enabling easy installation of the cables and protecting them from unauthorized access and damage.

5 Preferably the cable/s is split at one or more suitable points along its length to provide a section that also has a connector on its end to connect to a power input connector on the back of a power supply unit of the cassette/s. The use of a splitter cable/s preferably allows one or more cassette units to be taken out of the power circuit without other units losing power.

10 A power supply unit may be incorporated in the chassis or support means as part of a power distribution system of the desk. Alternatively, a power supply unit may be located within the cassette or so that the cassette can be connected to it. The power supply unit/s provide suitable DC power supplies for the computer components and VDU. Any suitable convenient values can be used and comprise +11 V., +5V, +2.3 V, 0 V., -2.3 V, -5 V, and C11 V. The power supply unit/s are preferably mains powered and supplied via the power cables. The power distribution  
15 system also preferably supplies power to the VDU/s and one or more cables may be split to connect to the VDU/s. Preferably for some VDU/s the power supply unit also provides power to the VDU. If a CRT (cathode ray tube) unit is used, then a standard voltage power supply is likely to be used and this is supplied either by an alternative splitter lead that provides an additional link or from an additional power connection.

20 Where a low voltage power supply is used (i.e. any power supply of 100 V or less), preferably a transformer unit supplies power to the system. Preferably this transformer unit may be positioned on the wall (or any other convenient place) between a mains power socket and the first desk. This power supply unit should be a Transformer of a suitable rating to allow transforming the  
25 incoming low voltage power to the appropriate voltages for the electronics and display components. Preferably, instead of the IEC splitter cable, at least three alternative cables/bus bars (live, neutral, and earth) may be used, with an appropriate specification for the voltage used. Each cable or bus bar meets at a connector to the cassette to facilitate a connection to the power supply unit for the cassette.

In those cases where the electronics are networked there may be included network cabling. There may also be included one or more communications systems, for example Internet, Intranet, access to one or more databases, audio and video systems, fax and other known systems. Cabling connecting the electronics system and any separate communication system may comprise split cabling or may link certain components in series or as otherwise required. The cabling provides a connection from adjacent one side of the desktop to adjacent another side of the desktop and also to one or more of the cassettes and possibly also to one or more peripheral devices. Where possible, the cabling is located within the desk, most of it being located in protective conduits and/or trays connected to the desk. Preferably the conduits and/or trays are part of the chassis. The communications and/or connections system may comprise one or more cables and/or UV, infrared, wireless or other systems for enabling electronics devices or units in one part of the desking system to communicate with electronics devices or units attached to the same desk or located in another part of the desking system. Network and communications cables preferably end adjacent each side of the desk that is to be connected to another desk with cable connecting means. In another embodiment, the electronics and/or communications distribution system comprises a cable extending from one side of the desktop to an electronics/communications connector unit connected to the chassis. The cable is preferably sufficiently long that it can be inserted through a hole in the chassis side of an adjacent desk and connected to a connector unit of the adjacent desk. In one embodiment the chassis comprises a segregated metal cable channel running between adjacent one side of the desk the cassette/s and another side of the desk, and also between those cables, the chassis and the various electronics components and peripheral devices, thus enabling easy installation of the cables and protecting them from unauthorized access and damage. In one embodiment the network and communications cable connection means comprises one or more plugs. In one embodiment a network and communications cable or group of cables ends at a male plug at one side of the desk and a female plug at the other side of the desk. The connection means preferably enable easy connection of the cables of adjoining desks, thus creating a continuous link between adjoining desks. Many of the electronics cables are preferable conveniently accommodated within the chassis. Where UV, infrared, wireless and like links are used there may be included repeater, transponder or other means to facilitate linking of the devices. Infra-red or wireless coupling can

be included in the computers, so that such network cabling is unnecessary. If additional cable channels for power and network cables are desired additional cable channels can be located in or adjacent the chassis, either fixed to the chassis or fixed to a wall or similar building component.

- 5 The location of the cables makes it possible to arrange a series of desks in such a way that there is a continuous route for cables. Rubber grommets are preferably provided at the openings at the sides of the desk where the cables exit and at ends of cableways in the desks to protect the cables. Preferably some grommets are such that when two desks are positioned side by side against each other two facing grommets compress against each other and therefore protect the cables where
- 10 they cross the gap between the desks. It will be appreciated however, that spur and/or ring power cable arrangements are possible using various openings for cable entry routes. In another embodiment cable plugs may be positioned on each desk such that when two desks are positioned side by side against each other and connected together two plugs connect together. Preferably cabling from power points and electronic and communications cabling for the desk
- 15 system is located in one or more legs of one or more desks so as to protect it.

According to a further aspect of the invention there is provided a bridge unit that may be used to connect two or more of the desks together. The bridge unit comprises a bridge-top comprising a top-face, bottom-face, and sides; a chassis; and a power distribution system mounted beneath the

20 top and within the chassis from one side of the bridge-top to another, connectable to adjacent desks an/or bridges at one or more sides. The bridge unit may or be mounted on its own support means. The bridge unit may include a power connector box and/or an electronics connector box. One or more of the desks to which it is connected may support the Bridge unit in place. The bridge unit may comprise a cassette comprising one or more electronics systems releasably

25 connected underneath the bridge-top face, but in many cases no cassette will be included. The bridge units may be linear in shape similar to a desk but without a cassette, or angle units enabling desk to be connected in the system in different configurations. The bridge units are in effect dummy units that can be included in the system to allow the spacing of the desk units to be increased and/or the line of desk units to include turns. Means (not shown) may be provided for

30 screwing or bolting the units together in addition to the interlocking by teeth and recesses. The

desks will normally be rectangular (possibly of different widths) and the bridge units will normally be square; however, they may be of any convenient shape, depending on the preferred layout to be achieved. The desks and bridge units may be made of any suitable combination of materials, for example metal, wood and/or medium density fiberboard (MDF).

5

The present system considerably eases the installation of desk systems, since it uses units that can be prefabricated and need little or no modification on site. Desk units may connect together and power cables may clip together to provide a system that is literally 'plug-and-play'. The system also reduces the chance of electronics components being damaged and/or stolen, because the components are located in a more protected area than in current desks. The components may be largely encased in a lockable cassette. Preferably the cassette itself is non-standard, making casual theft less likely. Accidental abuse is significantly reduced through the robust design of desk components and the encasing of cable and computer components within the chassis.

10

The desk provides flexible usage, either as computer desk or as an ordinary desktop generally cleared of computer components. The desk system provides the opportunity to provide desk, computer, VDU, and cabling more cost effectively, because the production processes involved in the manufacture of the desk components may also provide the infrastructure for the other components, such as a case for the computer components, a cable-way for the power, direct connections for both power and networking cables, and a combined power supply unit for both computer and TFT VDU.

20

Further features of the invention will become apparent from the following description of a desk and desk system embodying one aspect of the invention, given by way of example and with reference to the drawings, in which:

25

Fig. 1 is a top view of a desk according to one aspect of the invention.

Fig. 2 is a top view of the desk of Fig. 1 with the desktop removed.

30

Fig. 3 is a front view of the desk of Fig. 1.

Fig. 4 is a side view of the desk of Fig. 3.

5 Fig. 5 is a top view of a series of desks of the type shown in Fig 1 according to one aspect of the desking system of the invention

Fig. 6 is a front view of series of desks of the type shown in Fig 1 according to one aspect of the desking system of the invention.

10

Fig. 7 is a top view of a desk showing an alternate power distribution system, with the desktop removed

In Fig. 1 there is shown a part of a desk system according to the invention comprising desk 10.

15 Desk 10 may be connected to a similar desk according to the present invention, which may be the same or a different plan shape to the desk shown in Fig. 1. The desk has connecting means comprising connecting recess 13 at one side and a complementary retaining tooth 14 at the other side, so that two similar desks can when abutting interlock with each other. Also shown in Fig. 1 is a bridge unit 11 having a retaining tooth 15 and complementary connecting recess 16. As  
20 shown, the teeth and recesses may be on opposite sides of the desk/bridge unit or on adjacent sides.

Fig. 2 shows desk 10 with the desktop removed. In a stand-alone situation, the chassis 30 includes frame 31 in the form of metal tubing forming a rectangular frame. Four threaded  
25 mounting sockets 32 are cut into frame 31 at its corners to accommodate the legs 50, and a chassis 30 to which the mounting sockets are attached. The legs can conveniently be threaded and are screwed into mounting sockets 32. If two or more desks are positioned adjacent to each other, then only one desk requires four legs and the remaining linked desks each only need two legs, with the end without legs being supported on frame 31, which is part of the chassis 30,  
30 exposed by the cut-out 13 or the recessed sections of each retaining tooth. Alternatively, each

alternate desk/bridging unit may have 4 legs with each desk/bridging unit in-between resting on it.

5 The chassis 30 has an open section at its front edge that accommodates a computer cassette 37 that contains a central processing unit 45. The cassette includes a disc drive unit 43, a floppy disc drive, a Zip drive and a CD disk drive and other computer components. Those functions to which user access is required, such as the floppy and CD disk drives, the power-on switch, and possibly some USB ports, and headset connection ports and the like are located at the front of the cassette 37 adjacent the desk side at which the user works. Other functions, such as serial,  
10 parallel, and additional USB ports and speaker and perhaps headphone connectors, are located at the back of the cassette 37 and are accessed via the hole covered by hatch 19. For security purposes, the power-on switch may be located at the back of the cassette and accessed only through the hatch 19. The cassette is lockable against the chassis using a key mechanism 39 once the cassette has been fully inserted into the chassis.

15 The front of cassette 37 may conveniently be painted or finished with a powder coated metal fascia 40 or by any other suitable means and the front of the chassis 30 may be finished with a similar fascia 38. The cassette fascia 40 has appropriate cutouts in it to provide access to the various drives, switches and LEDs. Further, a security cover plate 46 is located in front of the  
20 cassette fascia and in one embodiment can be pivoted so that it can be lowered into a position below the cassette. In the raised position, the cover plate is locked into position using the same locking mechanism as for the cassette 39. The cover plate 46 may have the same finish as the fascias 38 and 40 and sits flush with the chassis fascia 38 when in the raised position.

25 The fabrication and servicing of the cassette is made easier by mounting the various drives in a metal cradle 44, which is then easily located into the cassette as a single unit using a minimum number of fixings. The drives may be held in place within the cradle by raised nodules punched into the two sides of the cradle, which then locate into holes at the side of the drives, and/or by inserting a U shaped channel 42 in between the drives, again with the appropriate nodules on the  
30 sides. The center strip 41 of the channel is made from sprung steel to allow the sides of the

channel to be squeezed together to allow the drives to be inserted. Where drives are only required on one side of the cradle, the other side has a dummy section inserted in order to maintain tension in the center channel.

- 5 The desk shown in Fig 1 operates on 240V and uses a system of standard IEC power cables 36 linked together and located beneath the desktop. Each cable comprises a male plug at the left hand end and a female plug at the right hand end. These plugs connect to the cables of adjoining desks, thus creating a continuous power circuit supplying adjoining desks. The IEC power cables are conveniently accommodated within a segregated metal cable channel within the chassis, running between the left-hand edge of the chassis 30 and the beginning of the cassette 37; this ensures easy installation of the cables and protects them from unauthorized access.

The cable is split at a suitable point along its length to provide a third section that has a female plug on its end. This connects to a power input connector on the back of the power supply unit 34 within the cassette. The use of a splitter cable allows one cassette unit to be taken out of the power circuit without other units losing power.

The power supply unit 34 in the cassette 37 provides suitable DC power supplies for the computer components and VDU. The power supply unit is mains powered and is supplied via the power cables 36. Where a TFT (thin film transistor) unit is used, the power supply unit can also provide power to the VDU using a spare power channel from the power supply unit. If a CRT (cathode ray tube) unit is used, then a standard voltage power supply is used and this is supplied either by an alternative splitter lead that provides an additional link or from an additional power connection at the rear of the power supply unit.

25 Where a low voltage power supply is used (i.e. any power supply of 100 V or less), a transformer unit 35 (Fig. 2) is used to supply power to the system. Instead of the IEC splitter cable, three alternative cables/bus bars (live, neutral, and earth) are used, with an appropriate specification for the voltage used. Each cable or bus bar meets at a three way connector located in the chassis 30 and positioned behind the cassette 37 to facilitate a connection to the power supply unit within

the cassette.

The computer shown consists not merely of a CPU and a disk drive unit but also a mouse (not shown), a keyboard (not shown), and a VDU. The VDU is of a TFT flat screen type located on a custom-designed mount means 51 (Fig. 3) mounted on the desk towards the center at the back, thus providing clearance from the desktop. This mount means allows appropriate movement of the VDU by the user. The signal and power cables for the VDU are routed via the hollow tube forming part of the mount means 51 to the VDU.

The signal cable for the mouse runs across the desktop and enters through the desktop via access recess 19 (Fig. 1) to one corner of the desktop and into a connector at the back of the cassette 37. Access recess 19 consists of a roughly oval hole in the desktop with a fitting cover 20 having a suitable number of cutouts 18. One side of cover 20 rests on a rim inside recess 19; the other end has a tongue that is first introduced into a slot in the edge of the desktop within the access recess.

Pressing the access hatch 20 where the rim is not present will therefore cause it to tilt, so that it can be temporarily removed to provide access to the rear of the chassis 30 behind the cassette 37. The cover 20 is locked to the desktop using a key-operated catch 12. Not only does the access hatch provide access to cable connections at the rear of the cassette 37, but it also provides a space to stow the mouse if desirable.

The desktop also has a slot 17 for storing the keyboard when it is desired to clear a larger space on the desktop. The signal cable to the keyboard can pass through the slot 17, facilitating stowage of the keyboard.

Network cabling is included in cable channel 33 for networking the computer to a central server. Telephone cabling is also provided. A modem is included in cassette 37 (or it could be connected to chassis 30 or on the desktop 10).

In Figs 5 & 6 there are shown 3 desks 10 of the type shown in Fig.1 with the connection recess 13 and retaining tooth 14 interconnected to connect the desks. Ends 80 and 81 have been



connected to cover the free connection recess 13 and retaining tooth 14 to thereby provide straight sides at the free ends of the series of desks.

In Fig. 7 a power cable 101 is connected to power unit 100. The second cable connecting a second desk to power connector 100 is not shown. Trays 160 and 162 are located under the desktop, one adjacent each of two sides of the desk. Preferably one or both of the trays create an air channel that assists in ventilating and cooling at least some of the electronic components. Cassette 137 slidably inserts into opening 190 in frame 131 of chassis 130. Locks 105 may temporarily lock cassette 137 in place.

It can be seen, therefore, that the desking system as described may involve critical relationships between the leg mounting sockets 32, the cable channel 3, the access hatch 19, the keyboard slot 17, and various openings within the chassis for cable entry routes.

The present system is obviously susceptible to numerous modifications and variations. For example, units may have variable height legs and/or fold back against the wall to provide flexible use of space. Where desktops form the end of a run of desks, then the free end of the desktop can be manufactured without a cut-out or projection in order to provide a neat end profile.

The cassette/s are also capable of being accommodated within other pieces of furniture where the concept for their accommodation and operation remain the same.

Claims:

1. A desk adapted for connection to another desk as part of a network of desks, each desk comprising:
  - 5 a desktop comprising sides, a bottom-face, and a work surface on the top side of the desktop; desktop support means; a chassis comprising one or more cassettes containing one or more electronics systems; a power distribution system and an electronics connections system, both mounted beneath the desktop and within the chassis and extending from one side of the desktop to another, connectable to at least one cassette and connectable to similar adjacent desks at one or
   
10 more sides.
2. A desk as claimed in claim 1 wherein at least one face of a cassette is located adjacent the desktop side at which a person works at the desk such that the cassette or one or more ports in the
   
15 cassette are accessible to that person.
3. A desk as claimed in claim 1 or claim 2 wherein the cassette/s are located under the desktop.
4. A desk as claimed in any one of claims 1 to 3 wherein the cassette is removably mounted
   
20 to the desktop.
5. A desk as claimed in any one of claims 1 to 4 wherein the cassette is mounted within the chassis.
6. A desk as claimed in any one of claims 1 to 5 wherein the underside of the desktop is
   
25 recessed to accommodate part or all of the cassette and components contained therein.
7. A desk as claimed in any one of claims 1 to 6 wherein the desktop top face extends over the top of at least most of the cassette and components contained therein.

8. A desk as claimed in any one of claims 1 to 7 wherein the cassette comprises a docking station to temporarily receive a Laptop, Notebook or other portable computer or electronics device.
- 5 9. A desk as claimed in any one of claims 1 to 8 wherein the desk comprises connecting means to interlock one desk to another desk or bridge unit.
- 10 10. A desk as claimed in claim 9 wherein the connecting means holds the desks/bridge unit securely together when connected to each other but allows easy disassembly when a desk is required to be moved.
11. A desk as claimed in claim 9 or claim 10 wherein the connecting means also provides the means of supporting that side of at least one of the two connected desks.
- 15 12. A desk as claimed in any one of claims 1 to 11 wherein power and electronics cables are, except for those extending to the VDU mouse keyboard and any other devices above the work surface, located beneath the desktop in the chassis.
- 20 13. A desk as claimed in any one of claims 1 to 12 wherein the cabling is located in protective conduits and/or trays connected to the desk.
14. A desk as claimed in any one of claims 1 to 13 wherein the conduits and trays are part of the chassis.
- 25 15. A desk as claimed in any one of claims 1 to 14 wherein the chassis comprises a segregated metal cable channel running from adjacent one side of the desk to another side of the desk and also to the cassette/s.
- 30 16. A desk as claimed in any one of claims 1 to 15 wherein there is further included a communications system.

17. A desk as claimed in any one of claims 1 to 16 wherein power cables, network and communications systems cables extend from cable connecting means adjacent one side of the desk that is to be connected to another desk to cable connecting means located adjacent another side of the desk, and the connecting means enable easy connection of the cables of adjoining desks, thus creating a continuous power circuit supplying adjoining desks and also a continuous electronics network and communications circuit.

18. A desk as claimed in any one of claims 1 to 17 wherein the power distribution system does not extend to both sides of the desk but the chassis further comprises a power connector to which a power cable from an adjacent desk connects through an opening in the chassis thereby providing the power connection for that side.

19. A desk as claimed in any one of claims 1 to 18 wherein the electronics and/or a communications system does not extend to both sides of the desk but the chassis further comprises an electronics and/or communications connector to which cable from an adjacent desk connects through an opening in the chassis thereby providing the electronics and/or communications connection for that side.

20. A desking system comprising two or more of the desks described in any one of claims 1 to 19 which are adapted to be connected together.

21. A desking system as claimed in claim 20 further comprising at least one bridge unit.

22. A desking system as claimed in claim 21 wherein the bridge unit comprises a bridge-top comprising a top-face, bottom-face, and sides; a chassis; and a power distribution system mounted beneath the top and within the chassis from one side of the bridge-top to another, connectable to adjacent desks and/or bridges at one or more sides.

23. A desking system as claimed in claim 21 or claim 22 wherein the bridge unit further comprises an electronics and/or communications distribution system mounted beneath the top

and within the chassis from one side of the bridge-top to another, connectable to adjacent desks and/or bridges at one or more sides.

24. A desking system as claimed in any one of claims 21 to 23 wherein the bridge unit is  
5 primarily supported on at least one side on one or more of the desks to which it is connected.

25. A desking system as claimed in claim any one of claims to 20 to 24 wherein each desk  
further comprises rubber grommets at the openings at the sides of the desk where the cables exit  
and the grommets are formed such that when two desks are positioned side by side against each  
10 other two facing grommets compress against each other and thereby protect the cables where they  
cross the gap between the desks.

## ABSTRACT

5 A desk and desking system, each desk being adapted for connection to another desk as part of a  
network of desks, each desk comprising:  
a desktop comprising sides, a bottom-face, and a work surface on the top side of the desktop;  
desktop support means; a chassis comprising one or more cassettes containing one or more  
electronics systems; a power distribution system and an electronics connections system, both  
10 mounted beneath the desktop and within the chassis and extending from one side of the desktop  
to another, connectable to at least one cassette and connectable to similar adjacent desks at one or  
more sides.

Fig. 1

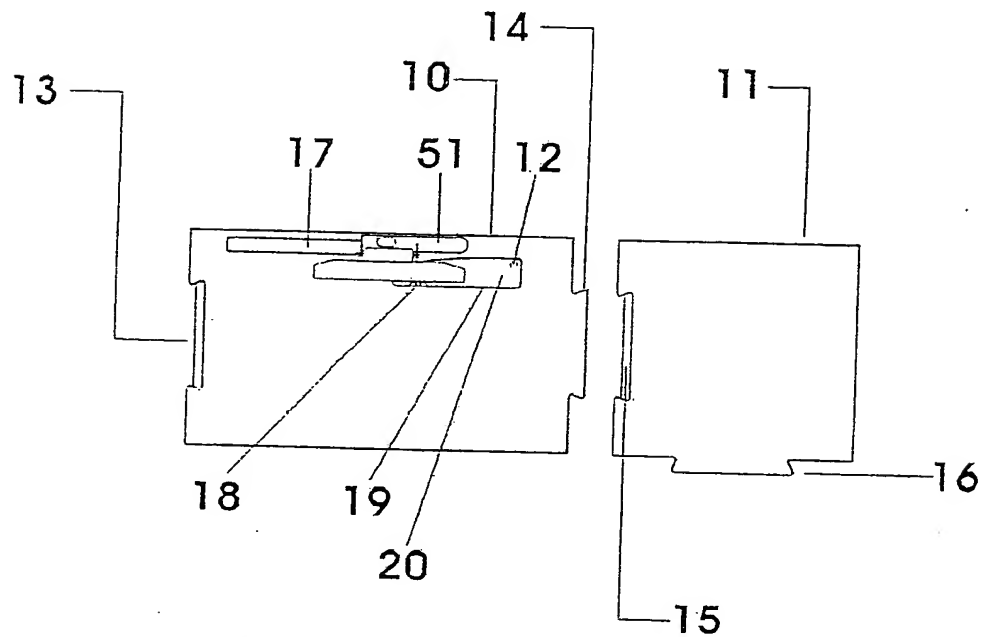


Fig. 2

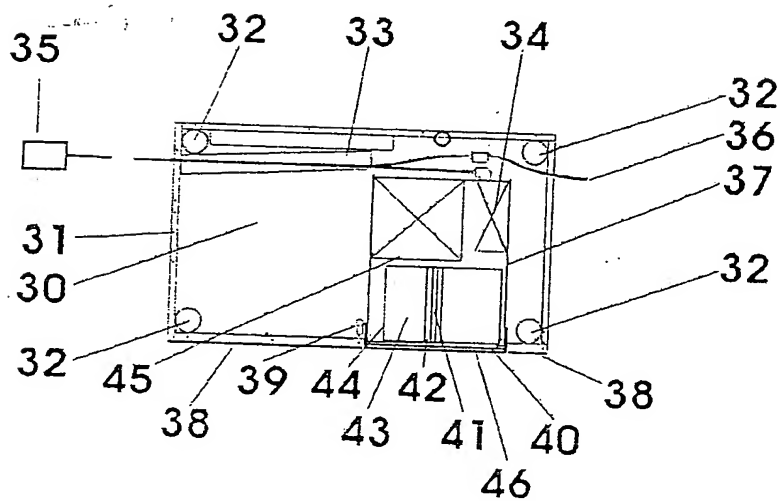
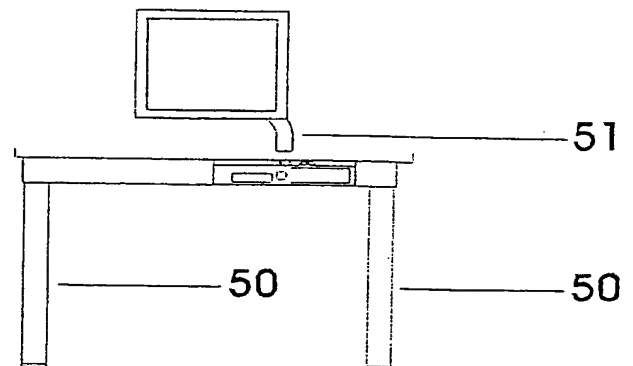


Fig. 3



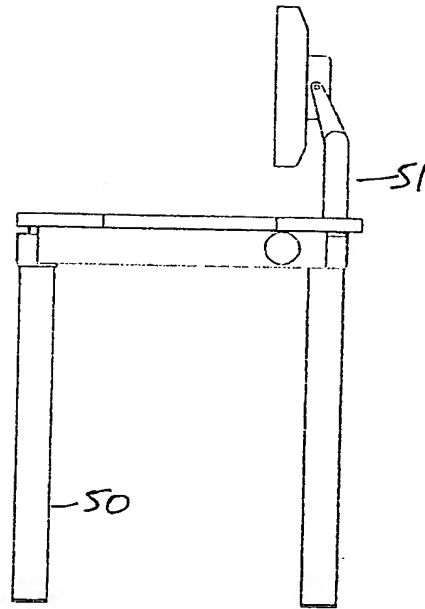


Fig. 4



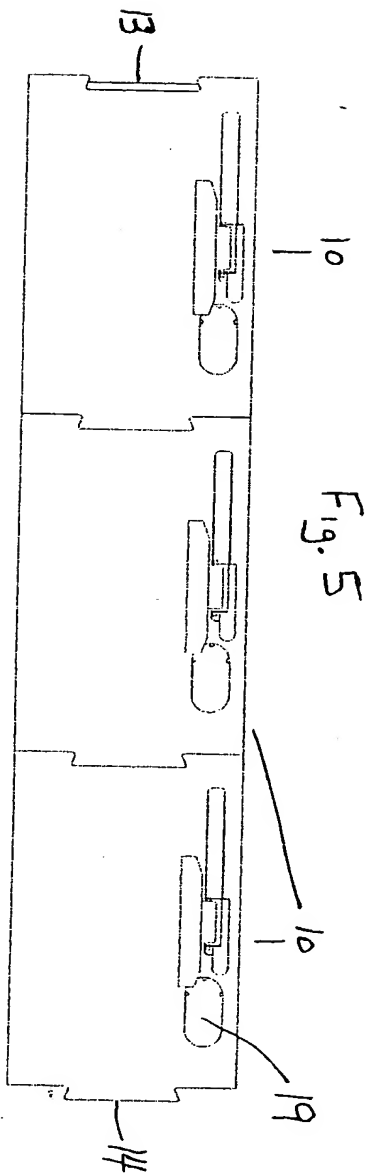


Fig. 5

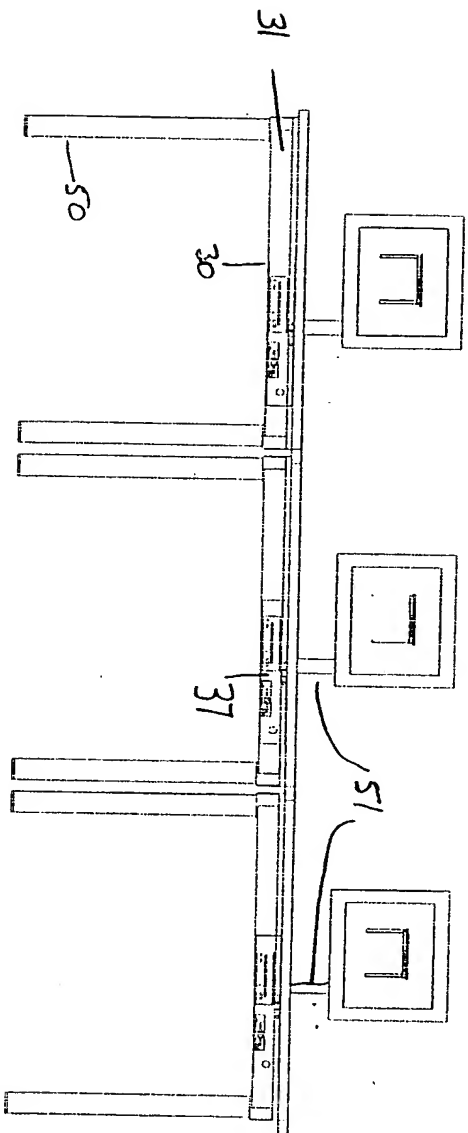


Fig. 6

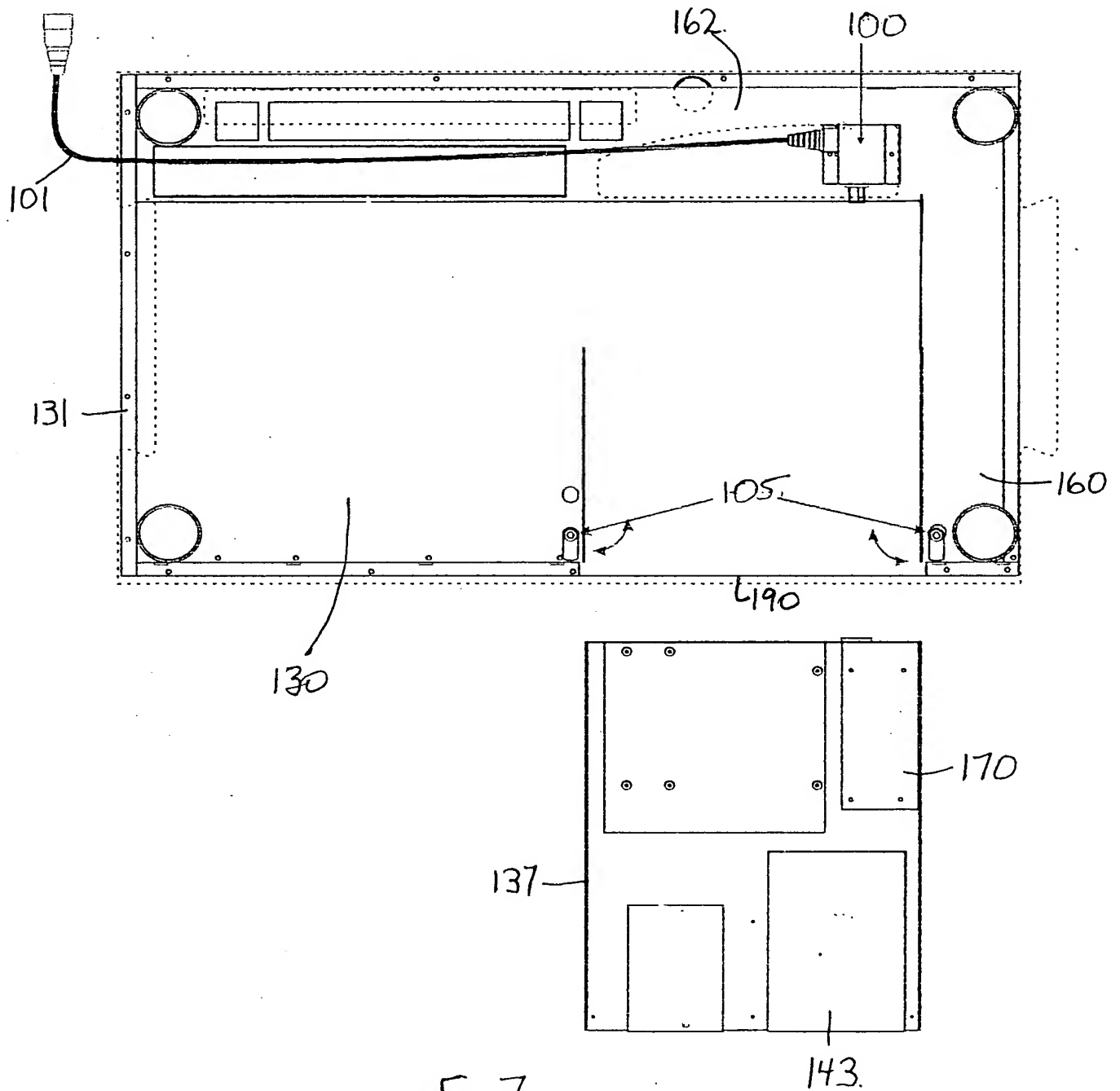


Fig 7.

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